Pannonia Bio Zrt

Hungary, Chemicals

Rating composition

Business risk profile		
Industry risk profile	BBB	B+
Competitive position	B+	
Financial risk profile		
Credit metrics	BB+	BB+
Liquidity	0 notches	
Standalone credit assessment		**BB-**
Supplementary rating drivers		
Financial policy	0 notches	0 notches
Governance & structure	0 notches	
Parent/government support	0 notches	
Peer context	0 notches	
Issuer rating		**BB-**

Key metrics

			Scope estimates	
Scope credit ratios*	**2023**	**2024**	**2025E**	**2026E**
Scope-adjusted EBITDA interest cover	3.1x	5.5x	6.4x	7.9x
Scope-adjusted debt/EBITDA	8.8x	3.5x	3.0x	2.3x
Scope-adjusted funds from operations/debt	7%	23%	27%	37%
Scope-adjusted free operating cash flow/debt	0%	28%	10%	25%
Liquidity	62%	118%	102%	143%

Rating sensitivities

The upside scenario for the ratings and Outlook:

- An improved business risk profile while leverage (debt/EBITDA) stays below 3.0x

The downside scenarios for the ratings and Outlook (individually):

- Debt/EBITDA above 3.5x on a sustained basis
- Repetitive failure to address potential breaches of loan covenants proactively

**All credit metrics refer to Scope-adjusted figures.*

Issuer
BB-

Outlook
Stable

Senior secured debt
BB+

Senior unsecured debt
BB-

Lead analyst

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Related methodologies

General Corporate Rating Methodology, Feb 2025
Chemicals Rating Methodology, Apr 2024

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1. Key rating drivers

Positive rating drivers	Negative rating drivers
• One of the largest and most efficient ethanol plants in Europe (ESG: credit-positive environmental risk factor) based on production capacity and EBITDA margin • Proximity to low-cost corn production areas and access to well-developed logistics infrastructure, although the competitive advantage is hindered by ongoing macroeconomic pressures • Operating costs among the lowest in the industry • Good financial credit metrics despite the impact of adverse market conditions • Improving Scope-adjusted EBITDA interest cover, but still below historical levels of above 10x • Waiver approval and recent covenant resetting providing more covenant headroom for FY 2025	• Persistently high imports of bioethanol and biodiesel imports into the EU from non-EU countries, entailing weakening effectiveness of protective measures • Very high asset concentration, with a single plant as the core asset • Weak product diversification, with four-fifths of sales coming from ethanol • Strong exposure to highly volatile commodity markets (corn and ethanol), although partially offset by DDGS/corn price correlation • No exposure to less-cyclical specialty products, but the company is investing in the development of such products

2. Rating Outlook

The **Stable Outlook** assumes sustainable compliance with all (financial) covenants after 2024. We expect leverage (debt/EBITDA) to remain within a range of 2.0x to 3.0x, supported by an EBITDA margin of around 15%. The Stable Outlook also reflects our expectation that competitive pressure from non-European import volumes, combined with volatile input costs, will continue to weigh on Pannonia's business risk profile, limiting its market position and slowing the pace of profitability improvement.

3. Corporate profile

Pannonia operates mainly in the production of bioethanol and related by-products

Pannonia Bio Zrt. owns and operates a biorefinery in Dunaföldvár, Hungary, which mainly produces ethanol and animal feed. The plant has the capacity to process yearly over 1.2m tonnes of corn and over 500m litres of ethanol, the latter of which is primarily blended into gasoline. The plant also produces dried distillers' grains with solubles (DDGS), corn protein concentrate, biomethane, corn oil and organic fertilisers. In addition to corn, the company commissions the capacity to process 0.3m tonnes of barley annually. Pannonia has over 400 employees.

4. Rating history

Date	Rating action/monitoring review	Issuer rating & Outlook
28 May 2025	Affirmation	BB-/Stable
20 Feb 2025	Downgrade and Under-review placement	BB-/Under Review for a possible downgrade
21 Feb 2024	Downgrade	BB/Negative

5. Financial overview (financial data in EUR '000s)

				Scope estimates		
Scope credit ratios	**2022**	**2023**	**2024**	**2025E**	**2026E**	**2027E**
EBITDA interest cover	>20x	3.1x	5.5x	6.4x	7.9x	9.6x
Debt/EBITDA	2.0x	8.8x	3.5x	3.0x	2.3x	1.8x
Funds from operations/debt	45%	7%	23%	27%	37%	47%
Free operating cash flow/debt	-17%	0%	28%	10%	25%	37%
Liquidity	134%	62%	118%	102%	143%	154%
EBITDA						
Reported EBITDA	142,906	37,868	67,860	79,383	88,359	90,406
add: recurring dividends from associates	-	1,453	-	-	-	-
Other items (incl. one-offs)[1]	7,026	(5,853)	3,287	135	135	135
EBITDA	**149,932**	**33,469**	**71,148**	**79,518**	**88,494**	**90,541**
Funds from operations (FFO)						
EBITDA	149,932	33,469	71,148	79,518	88,494	90,541
less: interest	(3,544)	(10,754)	(12,878)	(12,392)	(11,226)	(9,481)
less: cash tax paid	(12,813)	(3,270)	(2,247)	(3,425)	(4,224)	(4,650)
Funds from operations	**133,575**	**19,445**	**56,023**	**63,701**	**73,044**	**76,411**
Free operating cash flow (FOCF)						
Funds from operations	133,575	19,445	56,023	63,701	73,044	76,411
Change in working capital	(74,534)	15,556	15,527	(3,925)	(3,463)	(1,070)
Non-operating cash flow	(1,100)	(548)	6	10,043	-	-
less: capital expenditures (net)	(96,460)	(42,216)	(19,378)	(43,915)	(19,198)	(19,198)
less: lease amortisation	(2,016)	(2,023)	(2,153)	(1,196)	(1,196)	-
Other items[2]	(8,765)	11,212	19,159	(616)	1,000	3,306
Free operating cash flow	**(49,300)**	**1,426**	**69,184**	**24,093**	**50,188**	**59,449**
Interest						
Net cash interest per cash flow statement	3,544	10,754	12,878	12,392	11,226	9,481
Interest	**3,544**	**10,754**	**12,878**	**12,392**	**11,226**	**9,481**
Debt						
Reported financial (senior) debt	340,190	317,965	284,560	281,162	244,028	209,463
less: cash and cash equivalents	(43,945)	(23,102)	(39,939)	(47,562)	(45,194)	(47,775)
add: non-accessible cash	1,000	1,000	1,000	1,000	1,000	1,000
Debt	**297,245**	**295,863**	**245,621**	**234,600**	**199,834**	**162,688**

[1] Includes mainly one-off cost/revenues, gain/losses on asset disposal and change in provisions

[2] Includes mainly investment loans to subsidiaries and/or loan repayments from subsidiaries

6. Environmental, social and governance (ESG) profile[3]

Environment	Social	Governance
Resource management (e.g. raw materials consumption, carbon emissions, fuel efficiency)	Labour management	Management and supervision (supervisory boards and key person risk)
Efficiencies (e.g. in production)	Health and safety (e.g. staff and customers)	Clarity and transparency (clarity, quality and timeliness of financial disclosures, ability to communicate)
Product innovation (e.g. transition costs, substitution of products and services, green buildings, clean technology, renewables)	Clients and supply chain (geographical/product diversification)	Corporate structure (complexity)
Physical risks (e.g. business/asset vulnerability, diversification)	Regulatory and reputational risks	Stakeholder management (shareholder payouts and respect for creditor interests)

ESG factors: credit-positive credit-negative credit-neutral

Highly efficient production plant is a credit-positive ESG factor

Pannonia does not have a formal ESG strategy. However, it operates in a sector that requires compliance with stringent sustainability standards, including certifications for grain sourcing, biofuel production, and carbon accounting. The company's adherence to these requirements ensures regulatory alignment and market access. Additionally, Pannonia's large plant size, proximity to low-price corn-producing areas, good logistical infrastructure and continuous investment in efficiency initiatives make operating costs for the plant among the lowest in the European industry (ESG: credit-positive environmental risk factor).

In response to increasingly volatile corn harvests caused by adverse weather conditions, Pannonia updated in Q4 2024 the multiple sustainability certifications required for operating in this sector (e.g. the International Sustainability & Carbon Certification or ISCC). These updates ensure that ethanol produced from low-quality or toxic corn (further detail in Business Risk Profile section) meets regulatory standards in the European Union.

[3] These evaluations are not mutually exclusive or exhaustive as ESG factors may overlap and evolve over time. We only consider ESG factors that are credit-relevant, i.e. those that have a discernible, material impact on the rated entity's cash flow and, by extension, its credit quality.

7. Business risk profile: B+

The business risk profile continues to benefit from the company's still-supportive profitability and its highly efficient production facility (ESG: credit-positive environmental risk factor) which, due to its large scale and favourable location, supports a competitive operating cost structure. Conversely, the business risk profile remains constrained by Pannonia's significant exposure to commodity markets, weak asset and product diversification, and the absence of low-cyclicality specialty chemicals. In addition, high ethanol imports from outside the EU continue to weaken the effectiveness of market protection measures, thereby limiting Pannonia's market position.

Industry risk profile assessed at BBB but no impact on overall business risk profile

Under our Chemicals Rating Methodology, we classify Pannonia as a commodity-focused chemical producer, considering that ethanol and its by-products constitute over 90% of its revenues while the share of specialty products remains insignificant. Therefore, in line with our methodology, the industry risk profile is assessed at BBB. However, we do not incorporate any uplift to the competitive position and will continue to do so until specialty products achieve a significant share of revenues.

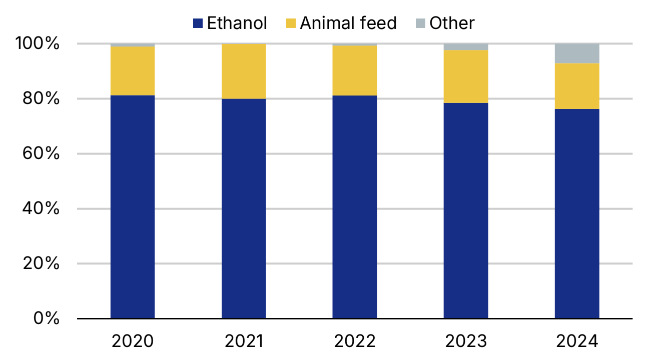
Semi-protected EU market for ethanol…

Our analysis focuses on the European rather than the global ethanol market. This is because, although the EU market is not entirely closed, it operates under protectionist measures (i.e. import tariffs and significant shipping costs). These measures usually limit large-scale foreign competition, as demonstrated by overall import volumes, which were less than 20% of total consumption until 2022. The semi-isolated nature of the EU market was also evidenced by a relatively low-price correlation between its main regions.

…but growing competition from outside the EU shows weaker effectiveness of market protective measures

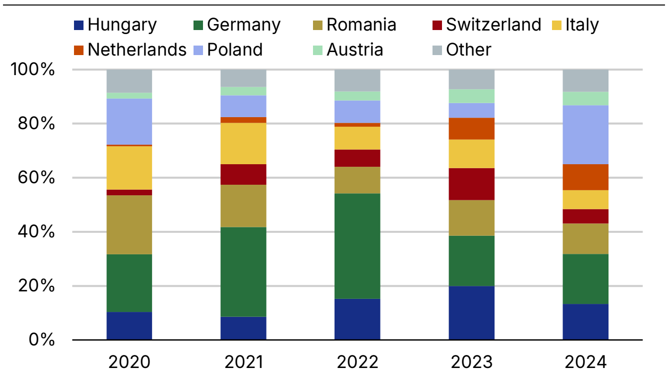
However, in recent years, high ethanol prices in Europe have attracted record import volumes despite significant import tariffs and shipping costs. At the same time, European producers faced pressure from high energy and logistics costs, exacerbated by the war in Ukraine. As a result, net imports, primarily from the US and Brazil, hit a record high of 25%-29% of total European (EU and UK) consumption, causing European ethanol prices to fall. The EU market remained attractive in 2024 for players outside of Europe. This was despite the sharp decline in European ethanol prices towards the end of 2023 and a narrower price differential with other markets including the US and Brazil. Ethanol demand grew around 4%, driven by E10 gasoline rollouts and higher blending mandates in some member states. However, despite higher domestic production, supply was still too low for demand, keeping import reliance at around 28% of total consumption. Over the next 12 months, we expect this trend to persist, with demand growth primarily met by imports, intensifying competition for domestic producers. Overall, we expect pressure on prices to continue in 2025, due primarily to higher domestic production costs and cheaper imports.

Figure 1: Revenue breakdown by product (%)



Source: Pannonia, Scope

Figure 2: Revenue breakdown by country (%)



Source: Pannonia, Scope

Weak product diversification and high volatility in commodity prices…

All Pannonia's main products are commodities, mainly ethanol. Commodity prices, such as for corn or ethanol, are highly volatile and Pannonia is a pure price-taker. If crush spreads become extremely low or negative, the company may have to suspend operations, but this is unlikely to last for long under normal conditions (e.g. no severe geopolitical tensions or significant government intervention) thanks to the company's low costs. In such an environment, those with less favourable cost structures tend to cease operations first, reducing the overall supply of ethanol and pushing up its price.

...are partly offset by correlation between DDGS/corn prices and ongoing investments

The high volatility of commodity prices is only partly offset by the strong correlation between DDGS and corn prices, which provides a natural hedge. The company is also addressing this issue by continuing to optimise production and develop higher-value products, which should boost margins while reducing the volatility of overall performance.

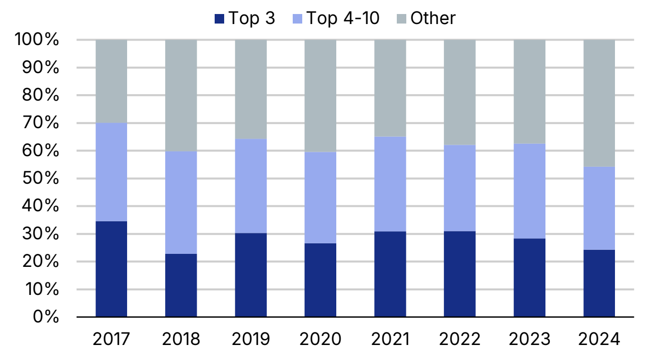
High customer concentration risk mitigated by solid credit quality of counterparties

Customer concentration remains high, with the top 10 customers contributing around 60% of total revenues. Nevertheless, the credit risk associated with this concentration is largely mitigated by the strong credit quality of these counterparties, reducing the likelihood of a material counterparty risk exposure. Conversely, the company exhibits a low degree of supplier concentration, with its top 10 suppliers accounting for around 20%-40% of total procurement in recent years. However, the slight increase in concentration above 30% from 2021 was driven primarily by elevated energy costs associated with its two largest suppliers.

Good geographical diversification

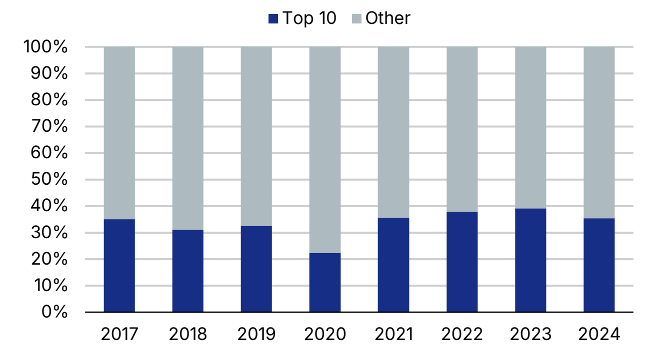
Pannonia maintains strong geographical outreach across multiple European markets, with Germany, Hungary, Romania, Italy and Poland consistently representing key regions of exposure. This diversification helps the company sustain demand, as most of these countries have specific greenhouse gas reduction targets that support ethanol fuel consumption. While the overall distribution has remained relatively stable over the years, fluctuations in country-specific contributions are evident, driven by local demand and opportunities.

Figure 3: Customer concentration as measured by revenues



Source: Pannonia, Scope

Figure 4: Supplier concentration based on total purchase value



Source: Pannonia, Scope

High asset concentration a constraint on the business risk profile

Pannonia's business risk profile assessment is restricted by the very high asset concentration, with a single plant as the core asset. This is despite investments in biogas plants in Slovenia and Serbia, due to the small size of the plants. The company addresses this risk mainly through extensive insurance coverage against severe damage, which would allow it to preserve asset values and service at least one year of debt payments.

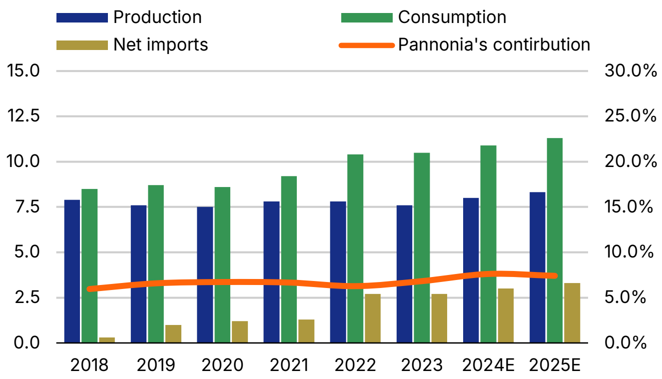
Large plant size enables economies of scale and market relevance

Pannonia's competitive position continues to benefit from its plant's large size, which enables significant economies of scale and market relevance. With an ethanol production capacity of over 500m litres per year, the plant is one of the largest in the EU and accounts for 6%-7% of the region's production. In addition, the company is working with selected industry players to optimise the production and distribution of its products.

Operating costs among the lowest in the industry

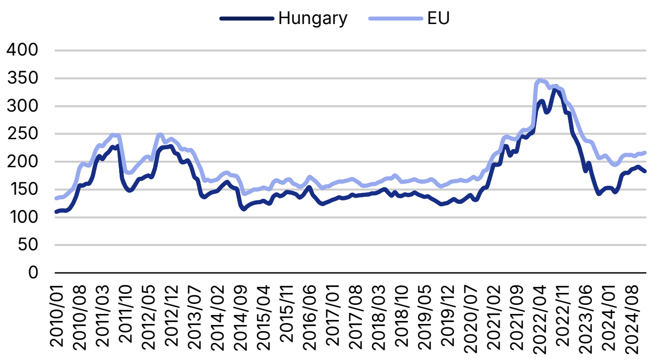
The abovementioned factor as well as the company's proximity to low-price corn-producing areas and its continuous investment to improve efficiency make operating costs for the plant among the lowest in the European industry (ESG: credit-positive environmental risk factor). According to management, the plant has always aimed to maximise output since operations started in 2012, except during the current European energy crisis.

Figure 5: Pannonia accounts for over 6% of EU and UK ethanol production



Source: IHS Markit, Scope estimates

Figure 6: Feed corn price (EUR/t), Jan 2010 to Sept 2024



Source: Eurostat, Scope

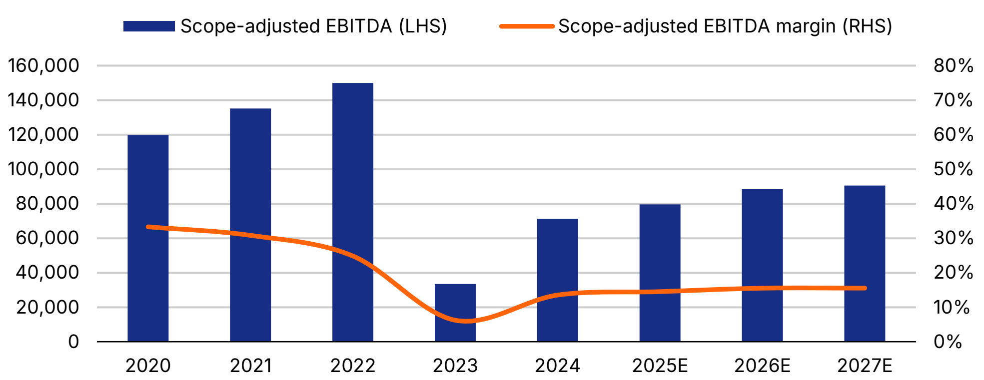
Challenging harvest conditions putting pressure on feedstock prices

Combined with the sustained high imports, the growing unpredictability of harvest conditions are adding to market volatility. The 2024 corn harvest in Europe was impacted by a combination of adverse weather conditions, disease outbreaks and regional production challenges. Excessive rainfall and flooding in key growing areas, particularly in France and Germany, led to lower yields and harvesting delays, while drought conditions in parts of southern and eastern Europe further reduced output, driving corn prices higher. Additionally, in Hungary, high aflatoxin contamination rendered a significant portion of the crop unfit for food and feed markets, forcing supply chain adjustments.

In response, Pannonia adapted its business model in Q4 2024, shifting from avoiding to exclusively processing toxic corn. This transition required changes in procurement, certification and sales strategies, including regulatory approvals across multiple EU member states and the UK to classify its ethanol as "advanced" under RED III, with several markets already secured. The company also adapted its sustainability certifications, such as the ISCC, and implemented a process with the Hungarian Food and Feed Safety Authority to certify the toxic nature of the corn.

This strategic shift initially resulted in higher costs and delayed ethanol sales, negatively impacting Q4 2024 EBITDA. However, lower corn costs and premium pricing for advanced ethanol are expected to support profitability in 2025, mitigating the negative impact of lower DDGS sales premiums. If aflatoxin contamination levels exceed 20 parts per billion, the corn cannot be sold for food or feed and is instead redirected to alternative uses such as biogas production. Additionally, this strategic shift should better position Pannonia to manage similar situations in the future, ensuring greater adaptability in volatile market conditions.

Figure 7: Scope-adjusted EBITDA (EUR '000s) and Scope-adjusted EBITDA margin (%)



Source: Pannonia, Scope estimates

Scope-adjusted EBITDA was around EUR 71m in 2024, with the EBITDA margin recovering to 13.5% from 6.2% in 2023. The improvement was primarily driven by enhanced operational efficiencies, underpinned by stable production volumes, increased traction for protein concentrates, and a reduction in energy cost pressures.

Gradual profitability recovery, but market and supply challenges persist

However, profitability was constrained by weaker Q4 results, which were affected by higher supply costs stemming from challenging harvest conditions and delayed ethanol sales. We project a gradual improvement in the EBITDA margin to a range of 14.5%–15.5% over the 2025–2027 period, supported by increased production volumes, premium pricing for advanced ethanol, and efficiency gains from ongoing energy-saving investments. Nonetheless, persistently high levels of imports and increasing volatility in input costs and harvest conditions continue to pose risks to profitability and add to overall market uncertainty.

8. Financial risk profile: BB+

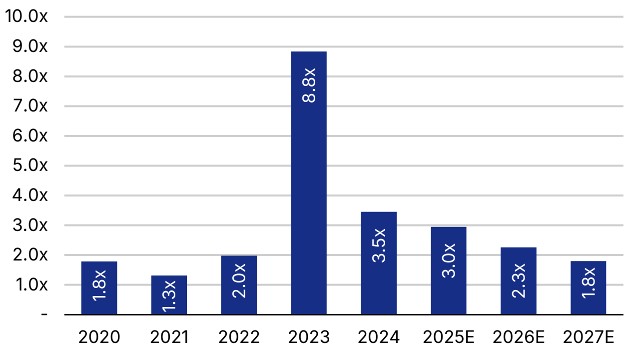
Pannonia's financial risk profile remains the main supportive factor for the issuer rating. While we expect a gradual recovery in credit metrics over the 2025–2027 period, the assessment reflects persistent sector-related risks and volatility, which continue to weigh on the visibility and sustainability of the recovery. The assessment also assumes full compliance with financial covenants over the forecast horizon.

Main assumptions for financial projections

Our financial projections are mainly based on the following assumptions:

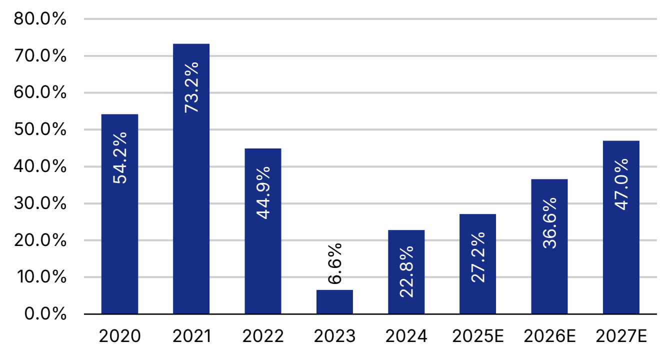
1. Growth in yearly ethanol production from 609m litres in 2024 to 616m litres in 2025 and 635m litres in 2026-2027 following past and ongoing investments
2. Crush margins stabilising below multi-year average
3. Total investments including maintenance capex of EUR 44m in 2025 and EUR 19m in 2026 and 2027
4. Loan repayments from subsidiary, in line with management indications
5. New debt of EUR 40m, in line with management indications
6. 50% dividend payout ratio subject to operating performance and covenants set by the bank loan agreement and approval by bank lenders
7. Debt includes a 25% haircut on cash and cash equivalents from 2024 onwards, reflecting the group's weaker business risk profile and EUR 1m of restricted cash

Figure 8: Scope-adjusted debt/EBITDA (x)



Source: Pannonia, Scope estimates

Figure 9: Scope-adjusted FFO/debt (%)

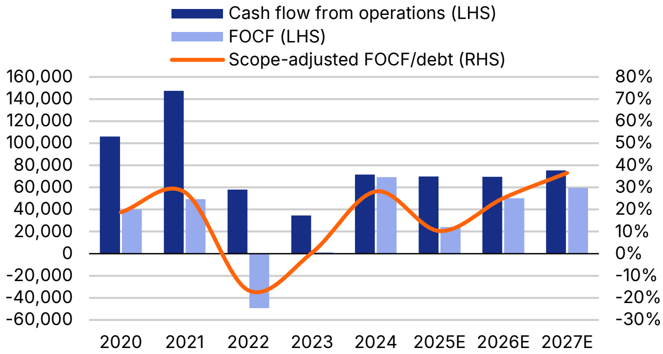


Source: Pannonia, Scope estimates

Gradual improvement of leverage compared to 2023 peak

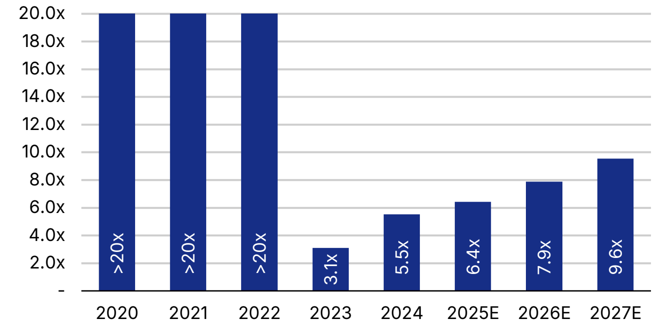
At YE 2024, debt (including the 25% haircut on cash and cash equivalents) declined to EUR 246m, with leverage (debt/EBITDA) improving to 3.5x from over 8.0x at YE 2023. This improvement was driven by a significant increase in cash flow generation, supported by margin recovery and asset disposals. We project this gradual deleveraging trend to continue over the next three years, underpinned by further debt reduction and margin improvement. Over the 2025–2027 period, leverage is forecast to remain within 1.8x and 3.0x. Nevertheless, some risk factors persist, including high import volumes and volatile corn yields. Lower-than-expected ethanol prices, combined with higher-than-expected corn prices, could compress crush margins and negatively impact Pannonia's EBITDA and deleveraging trajectory. Additionally, our base case does not incorporate a potential significant increase in capex, which could also slow the pace of deleveraging.

Figure 10: Cash flow from operations, FOCF (EUR '000s) versus Scope-adjusted FOCF/debt



Source: Pannonia, Scope estimates

Figure 11: Debt protection as measure by Scope-adjusted EBITDA interest cover



Source: Pannonia, Scope estimates

Moderate cash flow cover

As previously noted, we expect Pannonia's deleveraging to be supported by ongoing cash flow generation. In 2024, free operating cash flow (FOCF) increased to around EUR 69m, with the FOCF/debt ratio improving to above 28%, compared to breakeven in 2023. This improvement was primarily driven by the combination of higher EBITDA, working capital inflows and cash disposal proceeds from the solar project (EUR 19m), which fully covered the EUR 19m of capex executed during the year. We expect cash flow cover to remain positive over the next two years at between 10% and 37%, also based on the projected reduction in capex from over EUR 40m in 2025 to around EUR 19m annually in 2026–2027.

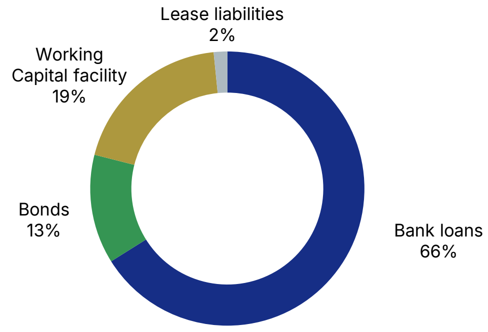
Supportive debt protection

Historically, debt protection was strong, with EBITDA interest coverage consistently above 10x until 2022. In 2023, the ratio declined to an all-time low of 3.1x, driven by a sharp drop in EBITDA and higher interest rates. In 2024, despite an increase in net interest payments, debt protection improved to 5.5x, supported by a rebound in EBITDA. Looking ahead, we expect interest cover to range between 6.0x and 10.0x, gradually improving as margins recover. Net interest payments are expected to remain broadly in line with the 2024 level, particularly in 2025, in light of the additional debt of around EUR 40m.

Maturity profile remains balanced

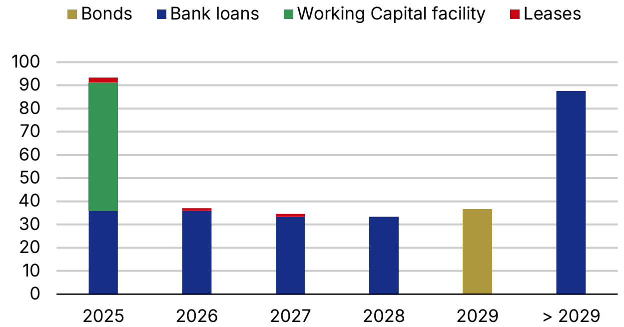
Pannonia's liquidity is driven by a largely balanced maturity profile. Bank loans are amortised quarterly, and the last payment is scheduled after 2029. The bond issued under the Hungarian National Bank's Bond Funding for Growth Scheme has a tenor of 10 years. The bank loans are denominated in euro, while the bond is in Hungarian forint.

Figure 12: Debt composition at YE 2024



Source: Pannonia, Scope

Figure 13: Debt maturities[4] (EUR m)



Source: Pannonia, Scope

Adequate liquidity

Pannonia's liquidity is adequate as demonstrated by the liquidity ratios, expected at above 100% over the 2025-2027 period. Upcoming debt maturities (EUR 90m in 2025, EUR 86m in 2026 and EUR 83m in 2027; including around EUR 50m of the working capital facility rolled over) are expected to be covered by unrestricted cash (EUR 32.5m as of March 2025), positive FOCF, and around EUR 15m in undrawn committed credit lines as of March 2025.

Waiver approval and full covenant compliance over projected period

Pannonia's bank loans are subject to financial covenants relating to leverage, cash flow cover, gearing and liquidity. While all covenants were met in Q2 and Q3 2024, a breach of the leverage covenant occurred at YE 2024, which was subsequently waived by the lending banks. For 2025, the leverage covenant thresholds were reset to 3.75x for Q2 and Q3, and 3.5x for the full year, providing adequate rating headroom. We project Pannonia to remain compliant with covenants over the 2025–2027 period, considering a base case scenario of more stable, albeit still volatile, sector conditions.

Table 1. Liquidity sources and uses (in EUR '000s)

	2025E	2026E	2027E
Unrestricted cash (t-1)	52,252	62,416	59,259
Open committed credit lines (t-1)	16,500	10,000	10,000
FOCF (t)	24,093	50,188	59,449
Short-term debt (t-1)[5]	91,244	85,939	83,369
Liquidity	**102%**	**143%**	**154%**

Source: Pannonia, Scope estimates

9. Supplementary rating drivers: +/- 0 notches

Credit-neutral financial policy

We view Pannonia's financial policy as neutral to its issuer rating, reflecting a balanced approach between maximising returns on invested capital and ensuring business sustainability. The company strategically allocates capital towards investments and dividends while maintaining financial stability. Furthermore, covenant restrictions under its bank loan agreement provide an additional safeguard as they limit significant cash outflows and require approval for any temporary breaches of financial thresholds.

No rating impact from shareholder structure

Our assessment of the group structure indicates no impact (either negative or positive) from potential parent support.

[4] From 2026 onwards excluding EUR 50m working capital roll over

[5] Includes around EUR 50m of Working Capital facility roll over

10. Debt ratings

Senior secured debt rating: BB+

We have affirmed the senior secured debt rating at BB+, two notches above the issuer rating. This is based on our recovery analysis that indicates an 'excellent' recovery for senior secured debt in the event of a corporate default. The recovery is based on an expected liquidation value in a hypothetical default scenario in 2026. While an excellent recovery rate on senior secured debt allows for up to three notches of uplift above the issuer rating, the two-notch uplift reflects our cautious stance regarding the volatility of some recovery rates such as on inventory and tangible fixed assets, which are subject to the evaluation at a time of liquidation.

Senior unsecured debt rating: BB-

We have affirmed the BB- rating on senior unsecured debt, including the HUF 15bn bond (ISIN: HU0000359112) issued under the Hungarian National Bank's Bond Funding for Growth Scheme. This is based on our recovery analysis that indicates an 'average' recovery for this debt category. The recovery is based on an expected liquidation value in a hypothetical default scenario in 2026.

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